

What is claimed is:

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1. A system for providing voice activated access to information from a plurality of data sources and voice repositories in a single phone call session, the system comprising:
 - a telephony platform;
 - a speech recognizer for recognizing user's voice commands;
 - a plurality of voice grammars that span relevant contexts for all data sources and voice repositories;
 - a plurality of extractors for accessing information from the data sources and voice repositories; and
 - an interpreter for parsing the voice commands recognized using said speech recognizer and said voice grammars and controlling said telephony platform and said means for accessing information.
2. The system for providing voice activated access to information as recited in claim 1, wherein said telephony platform provides a point of presence for placing phone calls to the system.
3. The system for providing voice activated access to information as recited in claim 1, wherein said telephony platform supports various standard telephony features.
4. The system for providing voice activated access to information as recited in claim 1, wherein said voice grammars support main and auxiliary voice commands.
5. The system for providing voice activated access to information as recited in claim 1, wherein said voice grammars support many languages.

6. The system for providing voice activated access to information as recited in claim 1, wherein each of said plurality of extractors is specific to a particular data source and voice repository.

5 7. The system for providing voice activated access to information as recited in claim 1, wherein said plurality of extractors are activated by the server.

8. The system for providing voice activated access to information as recited in claim 1, wherein said plurality of extractors extract information from the data sources and voice repositories.

9. The system for providing voice activated access to information as recited in claim 8, wherein said extracted information is passed to a VoiceXML generator.

15 10. The system for providing voice activated access to information as recited in claim 9, wherein said VoiceXML generator converts the information into a VoiceXML stream.

20 11. The system for providing voice activated access to information as recited in claim 1, wherein said interpreter has a VoiceXML parser for parsing the VoiceXML streams.

25 12. The system for providing voice activated access to information as recited in claim 1, wherein said interpreter controls said telephony platform for placing outbound calls, putting the calls on hold, and later reconnecting with the calls put on hold.

13. The system for providing voice activated access to information as recited in claim 1, wherein said interpreter redirects information to peripheral devices.

14. The system for providing voice activated access to information as recited in claim 1, wherein said interpreter controls a text to speech software to read back the VoiceXML stream to the user.

5 15. A method for providing voice activated access to a plurality of data sources and voice repositories in a single phone call session, the method comprising the steps of:

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logging on by a user;
recognizing voice commands issued by the user;
interpreting the voice commands;
extracting information from the data sources and voice repositories; and
presenting the extracted information to the user.

15 16. The method for providing access as recited in claim 15, wherein said logging step further comprises the steps of:

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placing a call to a telephony platform by the user;
holding the call on an incoming leg by the telephony platform;
creating an outbound leg by the telephony platform to a server;
directing extractors for a VoiceXML stream for authenticating the user; and
authenticating the user.

17. The method for providing voice activated access to information as recited in claim 16, wherein said directing step is done using Hyper Text Transfer Protocol (HTTP).

25 18. The method for providing voice activated access to information as recited in claim 16, wherein said authenticating step further comprises the steps of:

querying the user for a password and a user-id; and
verifying the password and user-id entered by the user.

19. The method for providing voice activated access to information as recited in claim 15, wherein said recognizing step comprises matching the voice commands with voice grammars.

5 20. The method for providing voice activated access to information as recited in claim 15, wherein said interpreting step further comprises the steps of:
parsing the received information; and
directing the information to a server that activates the relevant extractor.

10 21. The method for providing voice activated access to information as recited in claim 20, wherein said directing step uses the Hyper Text Transfer Protocol (HTTP).

15 22. The method for providing voice activated access to information as recited in claim 15, wherein said extracting step further comprises the steps of:
activating the extractors to extract the information from the data sources and voice repositories; and
converting the extracted information to a VoiceXML stream by a VoiceXML Generator.

20 23. The method for providing voice activated access to information as recited in claim 15, wherein said presenting step further comprises the steps of:
parsing the VoiceXML stream by an interpreter; and
performing an actionable step.

25 24. The method for providing voice activated access to information as recited in claim 23, wherein said performing step further comprises reading the VoiceXML stream to the user using text to speech engine.

30 25. The method for providing voice activated access to information as recited in claim 23, wherein said performing step further comprises emailing the

extracted information to a user specified address.

26. The method for providing voice activated access to information as recited in claim 23, wherein said performing step further comprises faxing the extracted information to a user specified number.
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27. The method for providing voice activated access to information as recited in claim 23, wherein said performing step comprises instructing the telephony platform to place an outbound call, putting the call on hold, and later reconnecting to the call on hold.
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28. A computer program product for providing voice activated access to information from a plurality of data sources and voice repositories in a single phone call session, the computer program product embodied on one or more computer readable media and comprising:
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a computer readable program code means for logging by a user;
a computer readable program code means for recognizing voice commands issued by the user;
a computer readable program code means for interpreting the voice commands;
a plurality of computer readable program code means for extracting information from the data sources and voice repositories; and
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a computer readable program code means for presenting the extracted information to the user.
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29. The computer program product as recited in claim 28, wherein said computer readable program code means for logging comprises:
a computer readable program code means for placing a call to by the user;
a computer readable program code means for holding the call on an incoming leg;
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a computer readable program code means for creating an outbound leg;

a computer readable program code means for directing extractors for a VoiceXML stream; and
a computer readable program code means for authenticating the user.

5 30. The computer program product as recited in claim 29, wherein said computer readable program code means for authenticating comprises:

a computer readable program code means for querying the user for a password and a user-id; and
a computer readable program code means for verifying the password and user-id entered by the user.

10 31. The computer program product as recited in claim 28, wherein said computer readable program code means for recognizing user's voice commands comprises computer readable program code means for matching the voice commands with voice grammars.

15 32. The computer program product as recited in claim 28, wherein said a computer readable program code means for interpreting the voice commands comprises:

computer readable program code means for parsing the received information;
and
computer readable program code means for directing the information to a server.

20 25 33. The computer program product as recited in claim 28, wherein said plurality of computer readable program code means for extracting information from a plurality of data sources comprises:

computer readable program code means for activating the extractors to extract required information from the data sources and voice repositories; and
computer readable program code means for converting the extracted information into VoiceXML stream.

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34. The computer program product as recited in claim 28, wherein said computer readable program code means for presenting the extracted information to the user comprises:
 - computer readable program code means for parsing the VoiceXML stream by the interpreter; and
 - computer readable program code means for performing an actionable step.
35. The computer program product as recited in claim 34, wherein said computer readable program code means for performing an actionable step comprises computer readable program code means for reading the extracted information to the user.
36. The computer program product as recited in claim 34, wherein said computer readable program code means for performing an actionable step comprises computer readable program code means for emailing the extracted information to the user.
37. The computer program product as recited in claim 34, wherein said computer readable program code means for performing an actionable step comprises computer readable program code means for faxing the extracted information to the user.
38. The computer program product as recited in claim 34, wherein said computer readable program code means for performing an actionable step comprises computer readable program code means for placing an outbound call for the user.